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What is claimed is:

SUB A<sub>6</sub> > 1. A method for forming a coating film, comprising the following steps:

applying a raw material of a low dielectric constant onto a surface of a plate-like material to be treated such as a semiconductor wafer and a glass substrate;

5 reducing the oxygen concentration in the atmosphere to be less than or equal to 1% before the surface temperature of said plate-like material to be treated rises to 200°C; thereafter

heating said plate-like material to be treated to be greater than or equal to 400°C while maintaining the oxygen concentration in the atmosphere to be less than or equal to 10 1%; and then

maintaining the oxygen concentration in the atmosphere to be less than or equal to 1% until the surface temperature of said plate-like material to be treated lowers to 200°C.

A 15 2. A method for forming a coating film as defined in claim 1, wherein the oxygen concentration in the atmosphere is lowered to be less than or equal to 1% by purging N<sub>2</sub> gas. WITH A

SUB A<sub>7</sub> > 3. A method for forming a coating film as defined in claim 1, wherein said method is conducted in one baking furnace, in the upper portion of which is positioned a hot plate, while in the lower portion of which is positioned a cool plate, in which said 20 plate-like material to be treated comes close to either one of said hot plate and said cool plate selectively by means of an elevator means.

4. A method for forming a coating film as defined in any one of claims 1 through

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3, wherein said method is applied to a forming of an interlayer insulation film by a damascene method.

ADD A8

ADD B7

ADD C4

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